**Lab 1: SURVIVAL ON THE MOON!**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block:\_\_\_\_\_\_\_\_\_\_\_ Partners:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Organize relevant facts about the moon into the appropriate categories below. Only use information that would be **pertinent to your survival** (how would the moon differ from Earth? and how this effect would your ability to maneuver and survive there if you were stranded?) **Number all facts 1-20 when complete**

|  |  |
| --- | --- |
| **General Facts**  | **Revolution (around the Earth) and Orbital Facts** |
|  |  |
| **Atmospheric Characteristics (or lack of) on the Moon** | **Surface Characteristics of the Moon (Topography, relief, reflectivity, etc.)** |
|  |  |
| **Rotation (spinning on its axis/length of day)** | **Interior Composition (similarities and dissimilarities to Earth)** |
|  |  |

**NASA EXERCISE**

**Situation:** You are a member of a space crew originally scheduled to rendezvous with a mother ship on the *lighted* surface of the moon. However, due to mechanical difficulties, your ship was forced to land at a spot some 200 miles from your original starting point. During reentry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200 mile trip. Below are the listed 15 items left intact and undamaged after landing. Your task is to rank them in order of their importance for your crew in allowing them to reach the rendezvous point. Place number 1 by the most important item and 2 by the second most important item, and so on through number 15, the least important.

In order for you to successfully do this activity you must know a little bit about the Moon itself. Consult your groups’ findings from your “20 facts” activity and any other information you found through collaborating with other students.

After you have successfully ranked all 15 items with your group, you must provide a written explanation for why you chose the order you did. This is done on the back of the assignment. Do not fill out “NASA’s Ranking” until this portion of the activity has been completed.

|  |  |  |  |
| --- | --- | --- | --- |
| Your Ranking Number |  Item | NASA’s RANKING | Difference (subtract high #-low #) between yours and NASAS  |
|  | Box of Matches |  |  |
|  | Food Concentrate |  |  |
|  | 50 Feet of Nylon Rope |  |  |
|  | Parachute Silk |  |  |
|  | Portable Heating Unit  |  |  |
|  | Two .45 caliber pistols |  |  |
|  | One case of dehydrated milk  |  |  |
|  | Two 100 lb. tanks of oxygen |  |  |
|  | Stellar Map (sky map) |  |  |
|  | Self-Inflating Life Raft |  |  |
|  | Magnetic Compass  |  |  |
|  | 20 Gallons of Water  |  |  |
|  | Signal Flares |  |  |
|  | First Aid Kit with injection needle |  |  |
|  | Solar Powered FM receiver and transmitter radio  |  |  |
|  | **ADD UP THE TOTAL DIFFERENCES (Right Column)** | **TOTAL** **SCORE🡪** |  |

**Scientific logic \_\_\_\_\_\_\_\_\_\_\_\_\_\_/50 points**

|  |  |  |
| --- | --- | --- |
| **Object (1 most imp.)** | **Written Rationale/Explanation for your ranking choice** | **Mistakes/Explanations for objects that have a difference of 4 or greater** |
| **1** |  |  |
| **2** |  |  |
| **3** |  |  |
| **4** |  |  |
| **5** |  |  |
| **6** |  |  |
| **7** |  |  |
| **8** |  |  |
| **9** |  |  |
| **10** |  |  |
| **11** |  |  |
| **12** |  |  |
| **13** |  |  |
| **14** |  |  |
| **15** |  |  |

**\_\_\_\_\_\_\_\_\_ /30 points for scientific reasoning**